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AGRICULTURAL BULLETIN

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THE HANTS COUNTY AGRICULTURAL EXHIBITION NOVA SCOTIA

While on a visit to Nova Scotia in September, which was primarily arranged to have a look at the seed potatoes destined for Bermuda, I also had the opportunity to visit the Hants County Agricultural Exhibition held at Windsor, Nova Scotia, from the 19th to 23rd September. It was also my pleasure to be invited to take part in the opening ceremony of this Exhibition and to officially open the Show on the 19th September.

The Hants County Agricultural Exhibition is reputed to be the oldest Agricultural Exhibition in Canada. The first show was held in 1765 and I was told that this has been held each year since that date. The Executive Committee of the Hants County Agricultural Exhibition is therefore hoping to celebrate the bicentenary of this exhibition in 1965. This, I feel, is an amazingly good record, and demonstrates the importance which is placed upon agriculture in Nova Scotia.

I was particularly impressed with the exhibits of livestock, and particularly with the exhibits of the Four H Clubs. These Four H Clubs which number about 7,000 throughout Canada, are organized to encourage children and young people to take an active interest in farming pursuits, and particularly in the raising of livestock. The parade of some 70 calves, prize winning animals in their respective classes, handled by the children, was a most impressive sight. Each calf in excellent condition and meticulously groomed presented a most satisfying spectacle, and one with which Hants County may be well pleased.

Livestock predominated in this exhibition with very large classes of both dairy and beef cattle, pigs, sheep and horses. The vegetable and fruit exhibits were large, with some very fine produce on display, but more space was needed to show the vegetables and fruit exhibits to the best advantage.

This show is well patronized by the people of Nova Scotia, the average daily attendance being about 5,000.

It was, therefore, of particular interest to me to see a Canadian Agricultural Show for the first time and to compare this with our own show. The two shows are naturally quite different, as would be expected, mainly because of the size of Nova Scotia compared with Bermuda, but nevertheless in our small community we are able to stage an Agricultural Show, which although small, compares very favourably with similar shows staged in other places. Comparisons of this kind are very helpful when trying to put our activities into their proper perspective. Thus, by visiting another country, one not only obtains a much better idea of the problems of that country, but is also able to obtain a better appreciation of our own efforts and to endeavour to steer a course towards increased efficiency.

G. R. G.

ON THE FARMS

Welcome rain fell during the middle of October spurring farmers to set out seedlings of broccoli, cabbage, cauliflower and tomatoes. Plants set out in earlier months are growing well. Some cabbage and broccoli will be available in November but the bulk of the crop will not reach the market until December. Farmers are advised not to apply residual insecticides such as DDT and Arsenic of Lead once cabbages, broccoli and cauliflower have started to head-up. Malathion dust or spray should be used to control caterpillars at this stage of plant growth. The only way to get good control of caterpillars, whether cabbageworms, cutworms or others, is to time your sprays to hit the small caterpillars. Once these pests become full-grown they are very difficult to keep down no matter how much one sprays. Removal of old plants which have finished cropping is also important since these simply serve as a source of food for new caterpillars if left in the ground.

There are some good fields of carrots around and a few small patches of beets. In fact there might be a small supply of new carrots on the market this month. Carrots are subject to two diseases of importance: one is a virus disease known as "yellows", while the other is a fungus disease called "leaf blight". The "yellows" disease is spread by an insect known as a leafhopper. The leafhopper should be controlled with DDT in order to prevent the spread of this disease. The leaf blight of carrots result in a rapid dying of the foliage. Copper sprays will control this disease.

Local tomatoes should be available in limited quantities this month and will be plentiful in December if the weather is favourable.

Onion seed is well up and a few farmers have transplanted their sets. It will be some time before we can expect new onions though.

Bermuda-grown strawberry plants are being transplanted at this time of year and imported stocks are being set out. Florida 90, a big, firm berry, is very popular in Bermuda now and yields very well.

A total of 1,197 barrels of seed potatoes have been imported from Canada thus far this year. Of this number 857 barrels are Pontiacs and 340 are Triumphs. This indicates the current popularity of the Pontiac potato over

the once preferred Triumph. The white varieties such as Kennebec and Sebago have not arrived as yet since they are normally planted only as a Spring crop.

I. W. HUGHES. CARLYLE HOLLIS.

BROWN DOG TICK

Ticks are near relatives of spiders and mites. They differ from insects in that the head and thorax (the central trunk of the animal) are fused and ticks have four pairs of legs in the adult stage as opposed to the three pairs of legs of adult insects.

In many countries ticks are very commonly encountered in woods and fields. A relatively few species occur as pests in the home. Some species of ticks are venomous and may cause paralysis; others are vectors of important diseases such as Rocky Mountain spotted fever and Texas cattle fever. Both male and female ticks suck blood.

Occasionally in the past ticks have been reported in Bermuda on dogs and cattle. These occurrences apparently never resulted in permanent establishment of the pests. However, in recent weeks several cases of ticks infesting dogs have been recorded in the Colony.

The tick concerned is known as the brown dog tick, **Rhipicephalus sanguineus** (Latr.). Female ticks when fully engorged with blood are about one-third of an inch in length and bluish-grey in colour. They are a very ugly sight. When engorged they drop from the dog and seek a protected spot in which to deposit 1,000 or more eggs. Indoors such a spot is often behind baseboards or in cracks in floors or ceilings. This tick has a tendency to climb upwards and will often be found in the roofs of buildings or kennels.

The eggs hatch in three to four weeks into tiny "seed ticks" which have only three pairs of legs. These "seed ticks" are about the size of buck-shot. When an opportunity arises these "seed ticks" attach to a dog where they feed for a week or more. They then leave the dog and undergo a moult in a protected spot. Several weeks or more may be spent in this non-feeding stage. A second moult is later experienced after a period of active feeding. The tick assumes adult form after the first moult but does not become sexually mature until after the second moult. The entire life cycle may take as long as four ro five months since in each of the unengorged stages this tick is capable of living for long periods without food.

The brown dog tick is primarily a pest of dogs although it has been reported on other animals including rats and mice. The tick can be a very great nuisance in the home once it becomes established, but does not normally bite man.

Adult ticks occur in the ears and between the toes on dogs, while the "seed ticks" and the immature forms are found in the long hair on the dog's back. By sucking the dog's blood the ticks can greatly reduce the animal's

vitality and make it irritable. The tick has been known to transmit a disease to the dog known as canine piroplasmosis.

Control of this tick is difficult. The first object should be to get rid of any ticks on the dog. Derris powder, DDT 10% dust or Chlordane 2% dust are suggested as treatments for the animal. Malathion 4% dust is also suggested as a control. Visible ticks should be removed from the dog after first loosening the tick's hold through the use of an insecticide or alcohol.

Infested dogs should be kept confined to avoid spreading ticks about the house and property. Kennels and runs should be sprayed with dieldrin at the rate of 2 lbs. of toxicant (e.g. 4 lbs. of 50% material) per 100 gallons of water.

Spot treatments indoors with a .5% dieldrin spray are effective in reducing infestations.

Any person who finds ticks on his or her dog or property is asked to contact the Department of Agriculture and Fisheries so that steps can be taken to have properties treated. Particular case should be taken to ensure that dogs arriving from abroad are not carrying ticks, for it is this way that the present infestations are thought to have started.

I. W. HUGHES.

POTATO, VARIETY "AVON"

Reference has been made in previous issues of this Bulletin to the potato variety known as "Avon". This is a comparatively new variety which was raised in Canada, and is becoming a popular potato in the Maritime Provinces. For at least two years, trial plantings of this variety have been grown in the trial plots of this Department, with promising results. For the Autumn and Spring plantings of the 1961-62 season, Avon is being grown on a larger scale to determine how it will crop under farm conditions.

The Avon, white skinned, is an early to medium season potato — just a little longer in maturing than the "Cobbler". It is an excellent quality potato, medium sized, and very uniform. It has rather deep set 'eyes'. The tops tend to be small, but this does not prevent the production of a heavy crop. From this description, and from the results we have obtained in our trial plots, it is considered that the Avon may be a good substitute for the Bliss Triumph. When the results of the Autumn and Spring plantings under farm conditions are recorded, further details of this variety will be released for general information. In the meantime, we shall appreciate further enquiries about the variety Avon, from both the potato growers and seed potato importers.

G. R. G.

GARDEN CALENDAR FOR NOVEMBER

Flower Garden

General. — Annual flower seed sown last month should be germinating by now, if the heavy rainfall experienced on the 19th/20th of last month, did not wash it from the soil.

All attention should be given to the care of the young seedlings if healthy, free-flowering plants are the ultimate desire. Details of cultivation have been covered in full in the October bulletin so I will not dwell on those points again.

Sowing of annuals can be continued throughout this month, if a succession of seedlings are required.

Floral Pageant. — Seeds of Statice; Strawflower, (Helichrysum); Acroclinium; and any other plants falling in the so-called everlasting group, must be sown this month if their flowers are required for the 1962 Floral Pageant. This particular group suffer a severe check if transplanted. For this reason, they should be sown in their flowering position and should not be disturbed after germination. The seeds are reasonably large and easy to handle, and it is a simple task to spot-sow them on the basis of 10" - 12" apart. Statice seed can be very erratic in germination percentage. Much depends upon the age and quality of the seed. For this reason, some seeds should be held back, should the initial sowing show poor response.

Other flowers suitable for Pageant work, include Calendula, and French or African Marigolds. These should not be sown until January or February, however, if required for that particular project. For general flowering, they can, of course, be sown any time from now on.

Sweet Peas. — Sweet Pea seed should be sown now for Spring flowering. They require a rich soil and a sheltered site for the finest results. Sowing in a poor starved soil can only lead to stunted, poor flowering plants. The site should, therefore, be chosen now and dug over, incorporating plenty of well-rotted organic matter, in the process of digging. Desirable organic matter would include farmyard manure, well-rotted compost or sea-weed, and peat moss. This procedure will ensure that the soil is always reasonably moisture retentive as well as in good organic condition. It should be remembered that the Pea family, are all moisture loving plants.

Because of their habit of growth and method of cultivation, Sweet Peas are best grown on their own and excluded from mixing in the general flower border.

The strain of Sweet Pea generally grown in Bermuda and most likely to succeed is the early winter-flowering Spencer type.

The plants may be trained up on bamboo canes or preferably on a framework of chicken wire, erected prior to sowing. The support may run down the centre of a double row, thus utilising space.

Allow time for the soil to settle after digging, and then sow your seeds about 1" deep and 3" apart in a double row about 12" apart. When the seedlings are 2" high, then thin them out to 6" apart. If extra large flowers are required, then each plant should be restricted to a single stem, pinching out any lateral or basal shoots that may appear. When profuse flowering is the intention, then pinch back the seedlings when they are 4" high to encourage bushiness.

A novelty which attracted some interest in the Botanical Gardens last Spring was a planting of the dwarf strain of Sweet Pea, sold under the variety

name of "Colour Carpet". This strain grows only a few inches high and forms a compact carpet bearing a succession of flowers over a long period. The stems are normally too short for cut flower purposes, but the interest is worthwhile the attempt of growing.

Sweet Pea seed and seedlings are vulnerable to attacks by rodents, birds, slugs and snails, and it is as well to bear this point in mind when sowing.

Gladiolus. — Gladiolus planted last month should be visible by now and growing well. Successional planting may be continued during this month.

Coleus. — Old Coleus plants tend to go very woody and may suddenly dieout, leaving ugly gaps in the bedding scheme. Cuttings taken now from these plants, either terminal or internodal, will quickly root and provide fresh young material for the Spring show.

Lilies. — Easter lily beds must be kept weeded.

Trees and Shrubs. — November is a good month to continue on with plantings of trees and shrubs. Established plants should be checked over, carefully pruning out all dead wood. Young plants set out during the year, should be checked for staking and tying and all dead wood should be pruned out.

DONALD J. MOORE,
Superintendent,
Bermuda Botanical Gardens.

BERMUDA CITRUS AT KEW

In our bulletin for January, 1960, news was given of the presentation of some thirty Bermuda grown Citrus trees to the Royal Botanic Gardens, Kew, by this department.

These trees were presented in January, 1959, as our contribution to the Royal Gardens 200th Anniversary, which, of course, tied in with Bermuda's 350th anniversary.

At that time, Kew were in the process of establishing an Orangery. The term Orangery, simply embracing a citrus collection under glass. This practice was very common and fashionable in England during the Victorian era, but like many other old-time practices had fallen by the wayside in competition with modern pace and costs.

Whilst visiting Kew in late September of this year, I made a particular point of visiting the Orangery. All the trees in the collection were standing outside the house, with the exception of one specimen of great size and antiquity. The practice of standing the trees outside in the summer, is also in keeping with the Victorian procedure.

The Bermuda trees, with the exception of one Meyer lemon, have all survived, and looked very healthy indeed. A Tangelo, Grapefruit and Orange, Washington Navel, were all bearing fruit, at the green stage. Whilst they have not yet reached the stage known as "tubbing up", they are just about ready to burst the sides out of their pots.

D. J. M.

VEGETABLE TRIALS

Many readers are familiar with the Vegetable Garden maintained in the Botanical Gardens. In the past, we have attempted to show visitors the range and season of vegetable crops which can be grown in Bermuda. The accent being placed upon production for the home garden rather than for the farm. Not that we ever intended to neglect the farming community, for available space was and still is our only limiting factor.

This Fall, whilst we shall still maintain the home garden approach, we will be increasing the range of specific varieties grown. The rapid advances made in science during the past few years, have not passed horticulture by. Considerable work has been done in breeding new varieties of both flowers and vegetables. The accent has been on improving flavour, yield and the season of the older accepted varieties. Great pains are gone to in order to ensure that new strains are consistent and variation nil.

Different soil types and climates may have their own influence on growth, flavour and length or time of season. For this reason trial plantings are necessary in the first instance. These trials are of no value, however, unless comparison crops of older, more familiar varieties are grown side by side, under identical conditions.

We will, therefore, be trying out a few of these improved strains in an effort to improve local crop practice.

The result of these trials will be published in this Bulletin, giving all possible details including crop yield and flavour tests for your benefit.

With the alarming rate that Bermuda's supply of arable land is being eaten up, any vegetable variety that can produce heavier yields in smaller growing areas, is of definite value to us.

D. J. M.

NOTES FROM TULO VALLEY NURSERY

A few announcements pertaining to Tulo Valley Nursery are as follows:—

Business Hours — 9.00 a.m. - 12 noon, 1.15 p.m. - 4.45 p.m. daily, with the exception of Thursdays and Saturdays when the closing time is 4.00 p.m.

Telephone number is 2-2503.

There are two requests I would like to make. Please observe the speed limit of 5 m. p. h. when motoring through the grounds. The route on the main road is clearly marked, and it is requested that use be made of the parking area (clearly marked).

The writer will endeavour to keep readers of the Bulletin up to date with plants which are new introductions, and are available from the Sales Centre of the Nursery. I would like to make it clear that by "new introduction" I do not necessarily mean new to Bermuda. However, I am implying that they are new plants available from the Sales Centre, and which the average person, I feel sure, is not familiar with.

The tree I have chosen to describe this month is **Acacia Cornigera** — of the Leguminosae family. It is described as a short or small tree, and its place of origin is East Tropical Mexico. It is also known as the "Ant Tree", but probably the most widely used common use is that of the "Bull Horn Acacia", which is a name applied to several species of Tropical Acacias, noted for their large stipular inflated spines which closely resemble the horns of a buffalo. (Acacia is from a word meaning a point or thorn — referring to the stipules, often spinescent.)

The flowers are usually yellow, small, and in stalked heads or spikes with the stamens free.

The fruit is in the form of pods which are indehiscent (not opening at maturity to discharge its seeds, i.e. the apple). They are inflated, thin, chartaceous (having a paper-like texture) and terminating in a sharp point. The smooth hard compressed seeds are surrounded by sweetish yellow or orange coloured pulp, somewhat like that found in the pod of "St. John's Bread". It is understood that pigs and other animals enjoy eating the pods when they have fallen to the ground.

The bipinnate leaves have nectar glands on the rachis and petiole, as in many other acacias, and they are still further provided with peculiar processes on the tips of the leaflets, minute waxlike bodies, rich in oil and protoplasm (the essential matter of all animal and plant cells).

Acacias as a rule are quick growing plants, at full maturity they attain a height of approximately 25'.

Propagation is by seeds sown under glass or out in the open ground, or by cuttings from half-ripened wood, taken with a heel. If sown by seed, a point can be mentioned, it will hasten germination if hot water is poured over the seed, let cool, and soak from twelve to forty-eight hours, and sow without allowing the seeds to dry. This method softens the hard seed-coats. After germination, the plants are put into pots and shifted into larger ones as occasion requires.

WILLIAM KUHN,
Agricultural Officer.

WEATHER RECORDING STATION AT BOTANICAL GARDENS

Summary of Climatogical data obtained at the Botanical Gardens during October, 1961

Mean maximum temperature 80.7
Mean minimum temperature 70.5
Mean monthly temperature 75.6
Absolute maximim 86.0 on October 3
Absolute minimum 59.2 on October 31
Rainfall 4.74 inches
Number of rain days 16